FLORIDA

DEPARTMENT OF REVENUE

Jim Zingale
Executive Director

General Tax Administration
Child Support Enforcement
Property Tax Administration
Administrative Services
Information Services

July 10, 2003

To: Interested Parties

From: Steve Keller, Chief Assistant General Counsel
         Al Mobley, MAI, CCIM, CAE, AAS, Revenue Program Administrator

Re: Second draft of the *Florida Uniform Market Area Guidelines*

Enclosed is the Department of Revenue's second draft of the *Florida Uniform Market Area Guidelines*, dated July 10, 2003. When adopted, this document will become part of the Department's Manual of Instructions for property appraisers and other officials connected with the administration of property taxes developed pursuant to section 195.062, Florida Statutes. When completed by the adoption of the *Florida Uniform Market Area Guidelines*, the Manual of Instructions will contain:

1. Rules and regulations, including the *Florida Uniform Market Area Guidelines;*

2. The valuation guidelines (standard measures of value) developed pursuant to section 195.032, Florida Statutes. These guidelines consist of:

    a) The Florida Real Property Appraisal Guidelines,
    b) Classified use guidelines for agricultural property pursuant to section 193.461, Florida Statutes, and
    c) Tangible personal property guidelines;

3. Forms and instructions relating to the use of the forms; and

4. Instructions relating to the use of maps.

Prior to the development of the initial draft of the *Florida Uniform Market Area Guidelines*, dated June 9, 2003, the Department held four public workshops in order to receive input from interested parties on the subject of market area codes on Florida assessment rolls. These workshops were held on the following dates and at the following locations: January 4, 2001 in Orlando; April 3, 2001 in Tallahassee; June 26, 2002 in Tallahassee; and July 9, 2002 in Orlando. The input received from these workshops and a few written comments was considered in the development of the initial draft of these uniform guidelines.

The initial draft of the *Florida Uniform Market Area Guidelines*, dated June 9, 2003, was based on Florida law, manual of instructions, regulatory requirements, and consideration of other sources of information. Such other sources of information considered in the development of the initial draft include the following: 1) Florida Property Appraisers and their representatives; 2) Florida taxpayers and their representatives; 3) the Property Tax Administration Task Force (includes representatives of a wide variety of Florida stakeholders); 4) professional references; and 5) the expertise, research, and analysis provided by Department of Revenue staff.

Two public workshops were held for the purpose of receiving public comments on the initial draft. These workshops were held on June 24, 2003 in Tallahassee and on June 26, 2003 in Orlando. These workshops were held on different dates and at different locations in order to maximize the opportunity for input from interested parties. A few written comments on the initial draft also were received. The initial draft, its sources, and the comments received on the initial draft were considered in the development of the second draft.

The Department has noticed two public workshops to receive input from interested parties on this second draft of the *Florida Uniform Market Area Guidelines*, dated July 10, 2003. The first of these workshops will be held on July 22, 2003 in Tallahassee and the second will be held on July 24, 2003 in Orlando. These workshops are being held on different dates and at different locations in order to maximize the opportunity for input from interested parties. Copies of the workshop notices and the second draft were mailed to all 67 Florida Property Appraisers and to all other persons on the Property Tax Administration's Interested Parties list. The workshop notices and second draft also will be posted to the Department's guidelines web page.

The second draft, dated July 10, 2003, is being provided to interested parties for review and comment. Please keep in mind that the intended use of these guidelines is for Florida Property Appraisers to use them to establish market areas and market area codes on real property assessment rolls as required by section 193.114, Florida Statutes. The intended use of market areas is for both Property Appraisers and the Department of Revenue to use them as geographic units in the statistical and analytical review of real property assessment rolls as described in section 195.096(2)(c), Florida Statutes. There may be other applications of market areas in the real estate industry and in the appraisal profession that are not relevant to the development and use of market areas on real property assessment rolls under Florida law.

We appreciate your review and comments, and request that you respond by July 31, 2003. Please direct your comments to the following address: Sharon Gallops, Tax Law Specialist, Department of Revenue, Property Tax Technical Unit, P.O. Box 7443, Tallahassee, Florida 32314-7443.

The workshop notice and second draft also will be posted to the Department's guidelines web page on the Internet at http://myflorida.com/dor/property/RP/pcomment.html. E-mail comments can be directed to the address given on that web page.

Enclosure

The Florida Uniform
Market Area Guidelines

Draft Dated
July 10, 2003

FLORIDA DEPARTMENT OF REVENUE
PROPERTY TAX ADMINISTRATION PROGRAM

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1.0   INTRODUCTION

1.1   Overview and Legal Framework.   Section 4, Article VII, of the Florida Constitution, requires a just valuation of all real property for ad valorem taxation, with certain exceptions.   Section 1(d), Article VIII, of the Florida Constitution, provides for the voters of each county to elect a Property Appraiser every four years.   As one of their tasks, Florida Property Appraisers have the statutory responsibility to list and appraise all real property in each county each year for purposes of ad valorem taxation.   The Florida Department of Revenue is a state administrative agency with the statutory responsibility of general supervision of the assessment and valuation of real property for purposes of ad valorem taxation.   The functions of Property Appraisers and the Department of Revenue are distinct and separate, as described below.

Section 193.085(1), Florida Statutes, states the following: *"The property appraiser shall ensure that all real property within his or her county is listed and valued on the real property assessment roll…"*

Section 195.002(1), Florida Statutes, states the following: *"The Department of Revenue shall have general supervision of the assessment and valuation of property so that all property will be placed on the tax rolls and shall be valued according to its just valuation, as required by the constitution. It shall also have supervision over tax collection and all other aspects of the administration of such taxes. The supervision of the department shall consist primarily of aiding and assisting county officers in the assessing and collection functions, with particular emphasis on the more technical aspects. In this regard, the department shall conduct schools to upgrade assessment skills of both state and local assessment personnel."*

1.2   Legislative Intent for Just Valuations and Uniform Assessments. The short title of Chapter 195, Florida Statutes, is the "Property Assessment Administration and Finance Law." The legislative intent for Chapter 195 is described in Section 195.0012, Florida Statutes, as follows.

"It is declared to be the legislative purpose and intent in this entire chapter to recognize and fulfill the state's responsibility to secure a just valuation for ad valorem tax purposes of all property and to provide for a uniform assessment as between property within each county and property in every other county or taxing district."

1.3   Specific Authority for Uniform Market Area Guidelines. Section 195.027(1), Florida Statutes, generally requires the Department of Revenue to prescribe rules and regulations for certain public officials, including Florida Property Appraisers, who must follow these rules and regulations. Section 195.062(1), Florida Statutes, specifically requires the Department of Revenue to prepare and maintain a current manual of instructions for Property Appraisers that includes rules and regulations. Sections 193.114(2) and (2)(a), Florida Statutes, specifically require the Department of Revenue to promulgate rules and guidelines for the establishment of market area codes (see section 1.4). Together, these statutes describe the specific authority and legislative intent for the promulgation and use of the Florida Uniform Market Area Guidelines.

Section 195.027(1), Florida Statutes, states the following: *"The Department of Revenue shall prescribe reasonable rules and regulations for the assessing and collection of taxes, and such rules and regulations shall be followed by the property appraisers, tax collectors, clerks of the circuit court, and value adjustment boards. It is hereby declared to be the legislative intent that the department shall formulate such rules and regulations that property will be assessed, taxes will be collected, and the administration will be uniform, just, and otherwise in compliance with the requirements of the general law and the constitution."*

Section 195.062(1), Florida Statutes, states the following: *"The department shall prepare and maintain a current manual of instructions for property appraisers and other officials connected with the administration of property taxes. This manual shall contain all:*

(a)   Rules and regulations.

(b)   Standard measures of value.

(c)   Forms and instructions relating to the use of forms and maps."

Based on the information in section 1.4 below, the Florida Uniform Market Area Guidelines are part of the rules and regulations portion of the manual of instructions as described above. Unlike the Florida Real Property Appraisal Guidelines, which are described in Section 195.062(1), Florida Statutes, as being part of the standard measures of value portion of the manual of instructions and, therefore, not having the force or effect of administrative rules, these Florida Uniform Market Area Guidelines are requirements and must be followed.

1.4   Legal Provisions and the Variation in Florida's Real Property Markets.
Sections 193.114(2) and (2)(a), Florida Statutes, state the following:

"(2) The department shall promulgate regulations and forms for the preparation of the real property assessment roll to reflect:

(a) A brief description of the property for purposes of location and, effective January 1, 1996, a market area code established according to department guidelines..."

These provisions specifically require the Department of Revenue to promulgate regulations, commonly referred to as rules, for the preparation of real property assessment rolls to include market area codes. These rules must be followed. The statute also provides for market area guidelines, which may be more flexible in their development and application, but which are requirements that also must be followed in order to meet the provisions of law. This application of guidelines allows for appropriate consideration of the variation in the legal, physical, and economic characteristics of the real property markets in Florida's 67 counties, while still complying with the requirements of Florida law including the legislative intent for uniformity in the just valuation of real property as described in sections 1.2 and 1.3.

The flexibility within this document must not impede the development and application of uniform market area guidelines.

1.5   Description of Geographic Stratification. The delineation and use of market areas under Florida law is an application of geographic stratification. For purposes of the Florida Uniform Market Area Guidelines, geographic stratification means to divide, or stratify, the real property parcels within a county into geographic groups, known as market areas, for purposes of statistical and analytical review of real property assessment rolls by both Florida Property Appraisers and the Department of Revenue. Any other applications of geographic stratification are not required and are at the discretion of Florida Property Appraisers.

1.6   Geographic Stratification for Mass Appraisal Quality Assurance. In this document, geographic stratification is discussed in the context of mass appraisal quality assurance, which may be different from the discussions of the subject found in the single-property appraisal literature and also different from the professional discussion of the subject for producing real property valuations using mass appraisal.

1.7   Purposes of These Uniform Guidelines. The purposes of the Florida Uniform Market Area Guidelines are as follows: 1) to provide direction to Florida Property Appraisers for the delineation and coding of market areas for use in the statistical and analytical review of real property assessment rolls; 2) to promote and help facilitate the accuracy and uniformity of just valuations of real property for ad valorem tax purposes, both within and between counties; and 3) to meet the Florida Department of Revenue's statutory obligation to promulgate rules and guidelines for the establishment of market areas and market area codes.

1.8   Intended Users of These Uniform Guidelines. Based on the statutory provisions referenced in sections 1.1, 1.2, 1.3, and 1.4 above, the primary intended users of the Florida Uniform Market Area Guidelines are Florida Property Appraisers and the Department of Revenue. Secondary users of these uniform guidelines may include taxpayers, other government agencies, and other interested parties. See sections 1.9 and 1.10 below.

1.9   Intended Use of These Uniform Guidelines. The primary intended use of the Florida Uniform Market Area Guidelines is for Florida Property Appraisers and their staff to follow them in the establishment of market areas and market area codes as required by Florida law. Subject to the provisions and limitations specified in section 1.10, the secondary intended use is for both primary and secondary users to consider these uniform guidelines as a source of basic knowledge of the delineation and intended use of market areas under Florida law.

1.10   Uses For Which These Uniform Guidelines Are Not Intended. The Florida Uniform Market Area Guidelines were not developed and are not intended to be used as the complete reference source on any of the following or similar subjects: valuation theory, approaches, methods, or procedures; geographic stratification; or applicable provisions of Florida law, manual of instructions, or regulatory requirements. This

document should be used in conjunction with other applicable sources of professional knowledge.

1.11 Sources of Information for These Uniform Guidelines. The Florida Uniform Market Area Guidelines are based on Florida law, manual of instructions, regulatory requirements, and consideration of additional sources of information. The reference to information from a particular additional source does not necessarily imply that such information is directly applicable to these guidelines or that all information from such additional sources is applicable to the delineation and use of market areas under Florida law. Additional sources of information considered in the development of these uniform guidelines include the following: 1) Florida Property Appraisers and their representatives; 2) Florida taxpayers and their representatives; 3) the Property Tax Administration Task Force (included representatives of a wide variety of Florida stakeholders); 4) professional references; and 5) the expertise, research, and analysis provided by Department of Revenue staff.

1.12 Other Sources of Information. Florida Property Appraisers are authorized to consider other sources of information for geographic stratification such as the various publications of the U.S. Census Bureau, published by the U.S. Department of Commerce, or Standard 6 on Mass Appraisal of the Uniform Standards of Professional Appraisal Practice, published by the Appraisal Foundation, but only to the extent that such other sources do not conflict with Florida law, manual of instructions, and regulatory requirements. See section 2.4.

2.0 INFORMATION FROM MASS APPRAISAL SOURCES

2.1 Overview. Certain mass appraisal references contain information regarding geographic stratification for real property ratio studies. In the event of any conflict between this information and the applicable provisions of Florida law, manual of instructions, and regulatory requirements, the latter shall apply.

2.2 Importance of Stratification for Ratio Studies. The following excerpts describe the need for stratification when using ratio studies to evaluate mass appraisal performance. Users of this document are cautioned that the use of neighborhoods specifically referenced in these excerpts is not applicable to statutory ratio studies in Florida due to the general insufficiency of market data within neighborhoods for statutory ratio study purposes.

"Stratification divides all the properties in a jurisdiction that fall within the scope of the study into two or more subpopulations (strata). Stratification provides a more complete and detailed picture of the extent and nature of appraisal performance and can enhance sample representativeness. Stratification, therefore, is essential in most ratio studies conducted by local assessors and is highly desirable, if not essential, in studies used for equalization and for similar purposes."

"Strata should be chosen with attention to the purpose of the ratio study, legal requirements, real estate submarkets, available sales (or appraisal resources in the absence of sales), and reliability requirements. Each type of property subject to a distinct level of assessment should constitute a stratum. Neighborhoods and other property groups or strata can also be developed, provided that such strata yield sufficient data." [1]

The excerpts above clearly reflect the importance of stratification in the use of ratio studies for evaluating mass appraisal performance. The last sentence in the preceding paragraph refers to geographic strata and other groups and the need to have sufficient data within such groups. In the case of ratio studies under Florida law, this denotes minimum sample sizes (sale counts) within market areas.

2.3 **Additional Discussion of Stratification for Ratio Studies.** Stratification is a useful technique for achieving representativeness in ratio studies. The following excerpts describe the appropriateness of stratifying real property by type, geographic area, and value range for ratio studies.

"As with any ratio study, a major issue is stratification." [2]

"Property class, geographic area, and value range are good candidates for stratification." [3]

The information from these excerpts is consistent with the provisions for ratio studies found in Section 195.096(2)(c), Florida Statutes. See section 4.3 for discussion of these statutory provisions.

2.4 **References from Standard 6 on Mass Appraisal.** Standard 6 on Mass Appraisal is part of the Uniform Standards of Professional Appraisal Practice. Standard Rule 6-2 (g) mentions identification of the appropriate market area.[4] Standards Rule 6-2 (h) mentions identification of market characteristics, including location of the market area and the legal, physical, and economic attributes of the market.[5] Standard 6 offers no specific guidance on the delineation or use of market areas. Under Florida law there is no requirement for Florida Property Appraisers to comply with Standard 6, although this standard may offer professional considerations and is referenced in these uniform guidelines only for that purpose. See section 1.12.

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[1] International Association of Assessing Officers, *Standard on Ratio Studies* (Chicago: International Association of Assessing Officers, 1999), page 10.

[2] Robert J. Gloudemans, *Mass Appraisal of Real Property*, (Chicago: International Association of Assessing Officers, 1999), page 322.

[3] Ibid, page 322.

[4] Appraisal Standards Board, *Uniform Standards of Professional Appraisal Practice, 2003 Edition* (Washington, DC: The Appraisal Foundation, 2003), page 48.

[5] Ibid, page 48.

3.0   IMPORTANT DEFINITIONS

3.1   Overview.   This section is not intended to represent a complete glossary of related terms, but rather is intended to include those most applicable.   Listed below are certain definitions applicable to the Florida Uniform Market Area Guidelines. These definitions are based on the following: 1) Florida law, manual of instructions, and regulatory requirements; 2) the intended uses of market areas as described herein; and 3) certain definitions from external sources.   In the event of any conflict between these definitions and related definitions from other sources, the definitions below shall apply.

3.2   Stratification.   Stratification is the division of real property populations or samples into two or more groups based on some defined criteria, resulting in property groups with one or more shared characteristics.   These groups, or strata, are useful for evaluating the accuracy and uniformity of mass appraisal results.   The appropriate level of stratification may range from general with only one criterion to detailed with several criteria.   In mass appraisal, the term "stratum" means one group, and the term "strata" means more than one group.   For regulatory analysis by the Department of Revenue, Section 195.096(3)(a), Florida Statutes, specifies seven real property classes, or strata.   See section 4.2.

3.3   Geographic Stratification.   For purposes of the Florida Uniform Market Area Guidelines, geographic stratification means to divide, or stratify, the real property parcels within a county into geographic groups, known as market areas, for purposes of statistical and analytical review of real property assessment rolls by both Florida Property Appraisers and the Department of Revenue.

3.4   Market Area.   A market area is a geographic real property group required by law to be identified by a code on all real property parcels on Florida assessment rolls.   The real property group within a market area has legal, physical, and economic characteristics.   Market areas are geographic divisions of Florida counties that, for purposes of these uniform guidelines, must not cross county lines.   A market area must include no more property types than those specified within one of the seven statutory strata described in section 4.2, with one possible exception (see section 6.2). A market area is a geographic stratification of one of the seven statutory strata.   The delineation of market areas must not be based on any non-geographic stratification of real property.   A market area is not synonymous with a comparable search area for a particular property or group of real property; a market area may be smaller than or larger than an appropriate comparable search area.

3.5   Market Area Codes.   A market area code is a two-digit code as described in Rule 12D-8.013(6)(c), Florida Administrative Code.   The purpose of market area codes is to identify real property groups that have been geographically stratified into market areas based on the real property types within each of the seven statutory strata described in section 4.2.   See sections 6.7 and 6.8.

3.6   Neighborhood.   A neighborhood is a geographic real property group. Neighborhoods and neighborhood codes are different from market areas and market area codes.   Market areas are larger geographic areas than neighborhoods. Neighborhoods may be a subset of market areas.   Neighborhoods and neighborhood codes are not required and are developed and used only at the discretion of Florida Property Appraisers.

3.7   Population.   In the context of real property mass appraisal, a population is defined as all real property parcels within a specified real property group.   Depending on the situation, such a real property group may be composed of all real property within a county, all real property within a statutory stratum within a county, all real property within a market area, or all real property within some other specified group.

3.8   Sample.   In the context of real property mass appraisal, a sample is defined as the qualified sales that may occur within a population of real property within a specified time frame, or the real property parcels that may be randomly selected for appraisal ratio studies.

3.9   Representative Sample.   Representative sample is defined in one mass appraisal reference as: *"A sample of observations from a larger population of observations that is similar in relevant features to the population; thus statistics calculated from the sample can be expected to be representative of the population being studied."* [6]

3.10   Representativeness.   Representativeness is a condition where the characteristics or statistics of a sample may be considered typical of the characteristics or parameters of the population from which the sample is drawn.   See definition of representative sample above.

3.11   Ratio Study.   Ratio study is defined in one ratio study reference as: *"A study of the relationship between appraised or assessed values and market values.   Indicators of market values may be either sales (sales ratio study) or independent 'expert' appraisals (appraisal ratio study).   Of common interest in ratio studies are the level and uniformity of the appraisals or assessments."* [7]

4.0   USES OF MARKET AREAS IN FLORIDA

4.1   Overview.   A clear understanding of the appropriate uses of market areas as defined herein is required in order to develop uniform market area guidelines and to delineate and code market areas in accordance with these uniform guidelines.   Florida Property Appraisers are required by law to delineate, code, and report market areas, and the Florida Department of Revenue is statutorily authorized to use market areas in

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[6] Robert J. Gloudemans, *Mass Appraisal of Real Property*, (Chicago: International Association of Assessing Officers, 1999), page 395.

[7] International Association of Assessing Officers, *Standard on Ratio Studies* (Chicago: International Association of Assessing Officers, 1999), page 40.

the real property assessment roll review process. Property Appraisers are encouraged to use market areas in their own mass appraisal quality assurance process and also to proactively evaluate regulatory compliance.

4.2 Statutory Real Property Strata. Section 195.096(3)(a), Florida Statutes, requires the Department of Revenue to compute statistical and analytical measures on the following seven real property classes, or strata, when the classes constituted 5 percent or more of the total assessed value of real property in a county on the previous tax roll.

1. *Residential property that consists of one primary living unit, including, but not limited to, single-family residences, condominiums, cooperatives, and mobile homes.*

2. *Residential property that consists of two or more primary living units.*

3. *Agricultural, high-water recharge, historic property used for commercial or certain non-profit purposes, and other use-valued property.*

4. *Vacant lots.*

5. *Nonagricultural acreage and other undeveloped parcels.*

6. *Improved commercial and industrial property.*

7. *Taxable institutional or governmental, utility, locally assessed railroad, oil, gas, and mineral land, subsurface rights, and other real property.*

Florida Property Appraisers may also perform statistical analyses on these seven strata for quality assurance and to proactively evaluate regulatory compliance.

4.3 Intended Use of Market Areas by the Department of Revenue. Section 195.096(2)(c), Florida Statutes, describes the intended use of market areas by the Department of Revenue during the review of assessment rolls, as follows.

"In conducting assessment ratio studies, the department must use a representative or statistically reliable sample of properties in tests of each classification, stratum, or roll made the subject of a ratio study published by it. The department shall document and retain records of the measures of representativeness of the properties studied in compliance with this section. Such documentation must include a record of the findings used as the basis for the approval or disapproval of the tax roll in each county pursuant to s. 193.1142. In addition, to the greatest extent practicable, the department shall study assessment roll strata by value groups or market areas for each classification, subclassification, or stratum to be studied, to assure the representativeness of ratio study samples. For purposes of this section, the department shall rely primarily on an assessment-to-sales-ratio study in conducting assessment ratio studies in those classifications of property specified in subsection (3) for which there are adequate market sales. The department shall compute the median

and the value-weighted mean for each classification or subclassification studied or for the roll as a whole."

As indicated in the preceding paragraph, geographic stratification using market areas is part of the Department of Revenue's assessment roll evaluation process under Florida law. This is consistent with the information in section 2.3. Also, see section 2.2 for additional related information. Stratification, including the delineation and use of market areas, is part of the evaluation of appraisal uniformity and the attainment of representativeness in ratio studies. The preceding paragraph also addresses minimum sample size requirements by references to *"statistically reliable sample of properties"* and *"adequate market sales."* Therefore, these Florida Uniform Market Area Guidelines must address the competing considerations of stratifying to evaluate uniformity and attain representativeness with meeting minimum sale count requirements. See sections 5.4 and 5.5.

4.4   Use of Market Areas by Florida Property Appraisers. For mass appraisal quality assurance purposes and to proactively evaluate regulatory compliance, Property Appraisers are encouraged to conduct sale ratio studies and any other applicable analysis using market areas as defined in these uniform guidelines. At the discretion of Florida Property Appraisers, these market areas also can be used in the value production process. However, the use of market areas in the value production process, which implies the application of a particular valuation methodology, is not required to achieve successful mass appraisal results. Consistent with Florida law, the Florida Uniform Market Area Guidelines are not intended to suggest or advocate the application of particular valuation methodologies. The use of particular valuation methodologies and the use of market areas in the value production process are decisions of administration discretion on the part of Florida Property Appraisers. See section 11.2 of the Florida Real Property Appraisal Guidelines, adopted November 26, 2002. At their discretion, Property Appraisers are authorized to develop and use, in the value production process, geographic units and related coding systems other than those described in these uniform guidelines, including other market areas and related coding systems.

5.0   DEVELOPMENT OF MARKET AREA DISTRIBUTIONS

5.1   Overview. This section contains information and analysis for the Department of Revenue's development of market area distributions for Florida counties.

5.2   Property Types Within Market Areas. As described in section 4.3, Florida law provides for the Department of Revenue to review each of the applicable statutory real property strata within counties using market areas. Therefore, the property types within each coded market area are based on the seven statutory real property strata as described in section 4.2.

5.3   Statutory Strata Subject to Review Using Market Areas. Statutory strata 3 and 7 are not subject to statistical and analytical review by the Department of Revenue

using market areas. Therefore, a single market area code is suitable for all stratum 3 property within a county and another single market area code is suitable for all stratum 7 property within a county. The other five statutory real property strata are subject to statistical and analytical review by the Department using market areas, and were analyzed to develop distributions of market areas for implementation of these uniform guidelines.

5.4 Minimum Sample Size Requirement for Market Areas. As described in sections 4.3 and 4.4, the intended use of market areas is to apply them as geographic strata for the statistical and analytical review of real property assessment rolls. As addressed in sections 2.2 and 4.3, sufficient sample size (number of qualified sale transactions) is a primary consideration in the delineation and use of market areas for the statistical and analytical review of real property assessment rolls. The Department's assessment roll review program using market areas is designed to review all real property sub-classes with at least 30 or more qualified sales within a calendar year. It is appropriate to provide a buffer between this sale count minimum and the annual variation in sale counts within market areas in order to maximize, from year-to-year, the number of real property sub-classes with at least 30 qualified sales. Therefore, the development of distributions of market areas for Florida counties will be based, to the fullest possible extent, on parcel counts per market area designed to achieve a minimum sample size within each market area of 40 qualified sale transactions within a calendar year.

5.5 Competing Considerations in Market Area Development. As described in section 1.1, Florida law requires uniformity in the just valuation of real property. The importance of stratification for evaluating appraisal uniformity and attaining representativeness in ratio studies is described in sections 2.2, 2.3, and 4.3. However, as described in section 5.4, real property groups in ratio studies must include sufficient sample sizes, or numbers of qualified sales. This consideration competes with the concept that more stratification is desirable. These two competing considerations indicate that, other factors held constant, market areas should be as small as practicable for ratio study stratification purposes, but large enough to meet minimum sample size requirements.

5.6 Methodology for Development of Market Area Distributions. The intended use of market areas requires giving primary consideration to balancing the need for stratification with the need for minimum sale counts and, thus, minimum parcel counts, while giving secondary consideration to other factors in the market area delineation process (see section 6.5). Across Florida's 67 counties, the positive correlation between parcel counts and sale counts within statutory strata generally is good but does vary (see first two columns in Tables 2 through 6 in Addendum). The primary unit of interest is sale counts per market area. However, this unit may be subject to significant annual variation. Parcel counts per market area are subject to less variation than sale counts per market area and are easier to determine. Therefore, the development of market area distributions for Florida counties will be based, to the fullest possible extent, on parcel counts per market area designed to achieve appropriate sale counts within each market area. The statutory requirements for uniformity, stratification, and representativeness indicates the desirability of

maximizing the number of market areas, within reasonable limits, while still meeting the minimum sample size requirements. These market area distributions will substantially enhance the Department of Revenue's primary reliance on sale ratio studies using available sale data as described in Section 195.096(2)(c), Florida Statutes (see section 4.3).

5.6.1   Existing Market Area Counts and Parcel Counts per Market Area. Table 1 in the Addendum contains parcel count data, qualified sale count data, and existing market area counts for statutory stratum 1 property for each county. These data were taken from the Department's analysis of the 2002 assessment rolls. The qualified sale data reflect sales that occurred during the 2001 calendar year. Data and analyses for all counties are sorted in ascending order by parcel count. Review of the fourth column, which contains existing market area counts for each county, reveals a lack of uniformity in the existing application of market area codes on Florida assessment rolls. Review of the fifth, sixth, and seventh columns, which contain parcel count per market area analyses, also reveals a lack of uniformity in the existing applications of market area codes on Florida assessment rolls. The eighth column contains an analysis of sale counts per market area. These analyses of existing data from Florida assessment rolls clearly demonstrate the need for the development and application of the Florida Uniform Market Area Guidelines. [NOTE: *Section 5.6.1 and Table 1 are included for informational purposes only and will be deleted from a future draft.*]

5.7   Development of Stratum 1 Market Area Distribution Using Parcel Counts. As described in section 4.2, statutory stratum 1 comprises residential property consisting of one primary living unit. The analysis model for development of a distribution of stratum 1 market areas using the parcel count per market area variable is contained in Table 2 in the Addendum. The information in Table 2 is described as follows.

(1)   The first column, titled "Stratum 1 Parcel Counts," reflects the number of statutory stratum 1 parcels for each county. The second column, titled "Stratum 1 Sale Counts," reflects the number of qualified sales for each county. These data were taken from the Department's analysis of the 2002 final assessment rolls. These two columns contain historical data arrayed in ascending order by parcel counts. The following columns contain calculated data resulting from the analysis.

(2)   The third column, titled "Estimated Parcels per MA," contains the variable on which this analysis is based. This variable was developed by consideration of the relationship between parcel counts and sale counts within counties, and then was tested in the model.

(3)   The fourth column, titled "Change Scenario," reflects the percent changes made to the estimated parcels per market area variable in order to create a reasonable distribution of market areas. This variable begins with 1,550 and progresses down the list based on a change scenario intended to maximize the use of available sale data through market area stratification while minimizing the number of counties with indicated sample sizes per market area (sixth column) of less than 40 qualified sales.

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(4)   In certain cases, the percent change scenario resulted in a subsequent county having a lower indicated number of market areas than the previous county. In such cases, the change scenario was overridden to indicate the same number of market areas as the previous county. This was done to create a smooth progression in the indicated distribution of market areas.

(5)   The fifth column, titled "Indicated Distribution of MAs," contains the number of market areas indicated by the analysis. These numbers were calculated by dividing the stratum 1 parcel counts (first column) by the estimated parcels per market area variable (third column), and then rounding to the nearest whole number. The analysis reflects only one market area for the three counties with the fewest parcels. At the other end of the array, the analysis indicates over 80 market areas for the two largest counties.

(6)   The sixth column, titled "Indicated Sales per MA," contains the average number of qualified sales per market area indicated by the analysis. These numbers were calculated by dividing the stratum 1 sale counts (second column) by the indicated rounded number of market areas (fifth column). Moving down the list, the indicated sales per market area increases to over 400 for the two largest counties. The Department of Revenue roll evaluation methodology is designed to utilize these larger sale counts within market areas by creating and performing statistical and analytical review of real property within value ranges within market areas for stratum 1 property.

(7)   The last column, titled "Indicated Parcels per MA," contains the average number of parcels per market area indicated by the analysis. These numbers were calculated by dividing the stratum 1 parcel counts (first column) by the indicated rounded number of market areas (fifth column). The numbers in the last column do not necessarily equal the numbers in the third column due to rounding in the calculations.

5.8   Development of Stratum 2 Market Area Distribution Using Parcel Counts.
As described in section 4.2, statutory stratum 2 comprises residential property consisting of two or more primary living units. The analysis model for development of a distribution of stratum 2 market areas using the parcel count per market area variable is contained in Table 3 in the Addendum. The information in Table 3 is described as follows.

(1)   The data sources and basic model structure in Table 3 is the same as those for Table 2. The parcel count and sale count data in the first two columns are arrayed in ascending order by parcel counts.

(2)   The third column, titled "Estimated Parcels per MA," contains the variable on which this analysis is based. This variable begins with 1,450 parcels and was developed by consideration of the relationship between parcel counts and sale counts within counties, and then was tested in the model.

(3) The fourth column, titled "Change Scenario," reflects the percent changes made to the estimated parcels per market area variable in order to create a reasonable distribution of market areas. Review of the indicated sale counts per market area (sixth column) and the indicated parcel counts per market area (seventh column) reveals that a constant change scenario of zero percent is appropriate for this data set in order to maximize the use of available sale data through market area stratification while minimizing the number of counties with indicated sample sizes per market area (sixth column) of less than 40 qualified sales.

(4) The fifth column, titled "Indicated Distribution of MAs," shows that most Florida counties do not have sufficient parcel counts to warrant more than a single market area for stratum 2 property. Only the largest counties show significant market area counts for stratum 2 property while generally meeting the minimum sample size standard of at least 40 qualified sales.

5.9   Development of Stratum 4 Market Area Distribution Using Parcel Counts.
As described in section 4.2, statutory stratum 4 comprises vacant lots. The analysis for development of a distribution of stratum 4 market areas using the parcel count per market area variable is contained in Table 4 in the Addendum. The information in Table 4 is described as follows.

(1) The data sources and basic model structure in Table 4 is the same as those for Tables 2 and 3. The parcel count and sale count data in the first two columns are arrayed in ascending order by parcel counts.

(2) The third column, titled "Estimated Parcels per MA," contains the variable on which this analysis is based. This variable begins with 1,500 parcels and was developed by consideration of the relationship between parcel counts and sale counts within counties, and then was tested in the model.

(3) The fourth column, titled "Change Scenario," reflects the percent changes made to the estimated parcels per market area variable in order to create a reasonable distribution of market areas. This variable progresses down the list based on a change scenario intended to maximize the use of available sale data through market area stratification while minimizing the number of counties with indicated sample sizes per market area (sixth column) of less than 40 qualified sales.

(4) The fifth column, titled "Indicated Distribution of MAs," shows that most Florida counties have sufficient parcel counts to warrant two or more market areas for stratum 4 property.

5.10   Development of Stratum 5 Market Area Distribution Using Parcel Counts.
As described in section 4.2, statutory stratum 5 comprises nonagricultural acreage and other undeveloped parcels. The analysis for development of a distribution of stratum 5 market areas using the parcel count per market area variable is contained in Table 5 in the Addendum. The information in Table 5 is described as follows.

(1)   The data sources and basic model structure in Table 5 is the same as those for Tables 2, 3, and 4. The parcel count and sale count data in the first two columns are arrayed in ascending order by parcel counts.

(2)   The third column, titled "Estimated Parcels per MA," contains the variable on which this analysis is based. This variable begins with 1,400 parcels and was developed by consideration of the relationship between parcel counts and sale counts within counties, and then was tested in the model.

(3)   The fourth column, titled "Change Scenario," reflects the percent changes made to the estimated parcels per market area variable in order to create a reasonable distribution of market areas. This variable progresses down the list based on a change scenario intended to maximize the use of available sale data through market area stratification while minimizing the number of counties with indicated sample sizes per market area (sixth column) of less than 40 qualified sales.

(4)   The fifth column, titled "Indicated Distribution of MAs," shows that most Florida counties do not have sufficient parcel counts to warrant more than a single market area for stratum 5 property.

5.11   Development of Stratum 6 Market Area Distribution Using Parcel Counts. As described in section 4.2, statutory stratum 6 comprises improved commercial and industrial property. The analysis for development of a distribution of stratum 6 market areas using the parcel count per market area variable is contained in Table 6 in the Addendum. The information in Table 6 is described as follows.

(1)   The data sources and basic model structure in Table 6 is the same as those for Tables 2, 3, 4, and 5. The parcel count and sale count data in the first two columns are arrayed in ascending order by parcel counts.

(2)   The third column, titled "Estimated Parcels per MA," contains the variable on which this analysis is based. This variable begins with 2,400 parcels and was developed by consideration of the relationship between parcel counts and sale counts within counties, and then was tested in the model.

(3)   The fourth column, titled "Change Scenario," reflects the percent changes made to the estimated parcels per market area variable in order to create a reasonable distribution of market areas. This variable progresses down the list based on a change scenario intended to maximize the use of available sale data through market area stratification while minimizing the number of counties with indicated sample sizes per market area (sixth column) of less than 40 qualified sales.

(4)   The fifth column, titled "Indicated Distribution of MAs," shows that most Florida counties do not have sufficient parcel counts to warrant more than a single market area for stratum 6 property.

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6.0 MARKET AREA DELINEATION AND CODING PROCESS

6.1 Overview. This section contains specific requirements that must be followed in the delineation and coding of market areas under Florida law. Other such requirements are specified elsewhere in this document.

6.2 Property Types Within Market Areas. As described in section 4.3, the purpose of the statutory provision for real property stratification by market area is for the Department of Revenue to review each of the applicable statutory strata by market area. Therefore, a group of real property parcels designated as a particular market area must include no more property types than those specified within one of the seven statutory strata described in section 4.2, with one possible exception. Counties with large numbers of residential condominiums may choose to develop a separate system of market area codes for this property type for the intended use described in these uniform guidelines. If a county selects this option, then a separate market area code must be applied to all parcels comprising each residential condominium market area.

6.3 Minimum Sample Size Requirement for Market Areas. As addressed in sections 2.2, 4.3, and 5.4, sufficient sample size (number of qualified sale transactions) is a primary consideration in the delineation and use of market areas for the statistical and analytical review of real property assessment rolls. Therefore, market areas must be delineated to contain, to the fullest extent possible, parcel counts sufficient to provide a minimum sample size of 40 qualified sale transactions within a calendar year. Due to the variation in qualified sale counts as a percentage of parcel counts, an iterative approach may be necessary when using parcel counts to develop initial market area boundaries and then testing this area for a sufficient number of qualified sales.

6.4 Uniform Implementation of Market Areas. Market areas and market area codes must be established on real property assessment rolls in accordance with these uniform guidelines. Since statutory strata 3 and 7 are not subject to statistical and analytical review by the Department of Revenue using market areas, a single market area code must be applied to all stratum 3 property within a county and another single market area code must be applied to all stratum 7 property within a county. Statutory strata 1, 2, 4, 5, and 6 are subject to statistical and analytical review by the Department using market areas. Primary consideration must be given to the parcel count requirements, described in sections 5.4 and 6.3, and to the uniform distributions of market areas, described in sections 5.7 through 5.11 and presented in Tables 2 through 6 in the Addendum, in the delineation and coding of market areas for each of these five statutory strata within each county. These uniform distributions of market areas indicate averages for parcel counts per market area and sale counts per market area. In order to meet the statutory requirements for uniformity, representativeness, and the maximum practicable use of available sale data for the Department's statutory ratio studies, it may be necessary to provide additional, specific, required parameters for the delineation and coding of market areas, such as minimum and maximum parcel counts per market area, minimum or maximum market area counts, or other similar

parameters. Any such additional parameters may be designed to address the situations in counties with different parcel counts.

6.5 Legal, Physical, and Economic Characteristics. The legal, physical, and economic characteristics of real property groups represent useful considerations for identifying reasonable market area boundaries consistent with the sale count requirements and market area distributions referenced in section 6.4 and with the seven statutory real property strata. Practical examples of such considerations include the following:

(1) Future land use classifications;
(2) Municipal limits;
(3) County lines;
(4) Census tracts;
(5) Subdivision boundaries;
(6) Rivers, Oceans, etc.;
(7) Major streets, expressways, canals, etc.;
(8) Changes in the type and size of real property parcels and improvements;
(9) Changes in real property construction quality and features;
(10) Changes in the quality of real property maintenance; and
(11) Changes in real property effective age.

6.6 Considerations for Market Area Boundaries. Market area boundaries must be delineated with primary consideration given to the sale count requirements and market area distributions referenced in section 6.4. The relevant legal, physical, and economic factors referenced in section 6.5 also must be considered in the delineation of market area boundaries. The intended use of market area codes on assessment rolls does not require a high degree of specificity in the consideration of these factors for the delineation of market area boundaries, and excessive reliance on these items must not impede primary consideration of the elements referenced in section 6.4. A market area boundary must not extend beyond a county line.

6.7 Implementation of Market Area Coding Systems. Market area codes are two-digit codes that are required on each real property parcel on Florida assessment rolls. No county may apply more than 99 market area codes within one of the statutory real property strata. A few of the largest Florida counties will be required to have 100 or more market areas in total. In order to meet the required total number of market areas using a two-digit coding system, these few counties must use the same market area code for more than one statutory real property strata. For example, such a county could have a market area code 20 for stratum 1 property and also have a market area code 20 for stratum 4 property.

6.8 Changes to Market Area Coding Systems. After submittal of the 2005 preliminary assessment rolls, any significant changes to market area coding systems must be reported to the Department of Revenue, along with appropriate justification, in a manner established by the Department.

6.9   Market Area Delineation and Coding Period. The Florida Uniform Market Area Guidelines will become effective on December 31, 2003. By July 1, 2005, Florida Property Appraisers are required to submit preliminary assessment rolls with market area codes on all real property parcels established according to the Department of Revenue's administrative rules and these uniform guidelines. This timeline provides to Property Appraisers a market area delineation and coding period of 18 months, or one and a half years. Any county that does not delineate market areas and submit market area codes on the 2005 preliminary assessment rolls in compliance with these uniform guidelines will be subject to appropriate measures under Florida law.

6.10   Market Area Delineation and Coding Plans. Florida Property Appraisers should submit to the Department of Revenue, by no later than August 15, 2004, a market area delineation and coding plan that lists and describes the following items: 1) the intended research steps; 2) the intended implementation steps; 3) the intended market area counts for each of the seven statutory strata; 4) the intended parcel counts for each market area; and 5) the intended market area coding system. After adoption of the Florida Uniform Market Area Guidelines, the Department will provide to Property Appraisers information describing the specific format and content for the recommended market area delineation and coding plans. Property Appraisers are encouraged to submit the market area delineation and coding plans as soon as possible after adoption of these uniform guidelines. The purpose of the market area delineation and coding plans is to properly allocate and manage the time and resources of both Property Appraisers and the Department by identifying early in the delineation and coding period any needs for aid and assistance or corrective actions.

6.11   Opportunities for Aid and Assistance. After receipt of the recommended market area delineation and coding plan and upon written request, the Department may provide professional aid and assistance to counties for the delineation and coding of market areas in compliance with these uniform guidelines. Any aid and assistance activities will be subject to resource availability and will be prioritized based on the date of receipt of a written request along with a market area delineation and coding plan in accordance with the required format and content. Where possible, counties are encouraged to submit their 2004 preliminary assessment rolls with preliminary market areas and market area codes established with the intent to comply with these uniform guidelines. Counties selecting this option, and desiring to receive analysis and feedback from the Department on these preliminary market areas and market area codes, must provide the Department with written notification of such submission so that the Department may plan to provide such analysis and feedback.

ADDENDUM

Table 1   - This contains actual real property parcel counts, qualified sale counts, and existing market area counts for each of the 67 counties for statutory stratum 1, along with low actual parcel counts and high actual parcel counts within existing market areas. These data are sorted in ascending order by actual parcel counts.

Table 2   - This contains data, analysis, and results pertaining to market area distributions for statutory stratum 1 real property for each county, based on estimated parcel counts per market area.

Table 3   - This contains data, analysis, and results pertaining to market area distributions for statutory stratum 2 real property for each county, based on estimated parcel counts per market area.

Table 4   - This contains data, analysis, and results pertaining to market area distributions for statutory stratum 4 real property for each county, based on estimated parcel counts per market area.

Table 5   - This contains data, analysis, and results pertaining to market area distributions for statutory stratum 5 real property for each county, based on estimated parcel counts per market area.

Table 6   - This contains data, analysis, and results pertaining to market area distributions for statutory stratum 6 real property for each county, based on estimated parcel counts per market area.

				TABLE 1			
Stratum 1 Parcel Counts	Relative Percent Change	Stratum 1 Sale Counts	Stratum 1 Market Area Counts	Low Parcel Counts per MA	High Parcel Counts per MA	Mean Parcel Counts per MA	Mean Sale Counts per MA
1,451		36	4	86	961	363	9
1,768	21.8%	22	9	44	828	196	2
2,012	13.8%	35	3	173	1,578	671	12
2,963	47.3%	67	1	n/a	n/a	2,963	67
3,040	2.6%	38	4	203	1,966	760	10
3,385	11.3%	78	3	41	3,252	1,128	26
4,088	20.8%	87	12	32	861	341	7
4,212	3.0%	54	6	91	2,194	702	9
4,232	0.5%	108	1	n/a	n/a	4,232	108
4,376	3.4%	150	2	1,233	3,109	2,188	75
4,888	11.7%	133	2	1,344	3,542	2,444	67
5,596	14.5%	169	4	435	3,292	1,399	42
6,026	7.7%	125	11	26	4,213	548	11
6,071	0.7%	126	2	317	5,753	3,036	63
6,532	7.6%	199	7	41	6,096	933	28
6,915	5.9%	236	7	227	2,490	988	34
6,924	0.1%	117	3	757	3,250	2,308	39
7,355	6.2%	177	1	n/a	n/a	7,355	177
8,299	12.8%	290	1	n/a	n/a	8,299	290
8,398	1.2%	243	8	167	3,228	1,050	30
8,932	6.4%	260	4	836	5,427	2,233	65
9,561	7.0%	254	3	238	7,361	3,187	85
11,992	25.4%	220	5	397	5,118	2,398	44
12,357	3.0%	260	6	120	3,565	2,060	43
12,703	2.8%	423	16	29	3,444	794	26
14,258	12.2%	346	2	729	13,529	7,129	173
15,939	11.8%	534	4	221	10,433	3,985	134
21,919	37.5%	778	1	n/a	n/a	21,919	778
21,946	0.1%	762	4	2,325	9,301	5,487	191
25,275	15.2%	1,235	11	29	16,354	2,298	112
26,234	3.8%	1,214	4	382	15,973	6,559	304
29,945	14.1%	832	3	7,584	11,488	9,982	277
34,579	15.5%	1,848	19	21	7,846	1,820	97
37,723	9.1%	2,382	22	74	6,619	1,715	108
44,902	19.0%	1,793	16	233	8,717	2,806	112
48,672	8.4%	2,606	8	29	25,154	6,084	326
49,117	0.9%	2,206	4	2,680	34,517	12,279	552
52,085	6.0%	2,676	8	2,557	13,299	6,511	335
56,574	8.6%	3,006	3	11,989	31,212	18,858	1,002
56,606	0.1%	3,318	6	510	43,446	9,434	553
58,565	3.5%	3,113	10	578	39,946	5,857	311
58,579	0.0%	2,455	34	30	5,594	1,723	72
60,765	3.7%	3,122	9	30	23,574	6,752	347
64,706	6.5%	3,313	10	294	23,246	6,471	331
65,227	0.8%	3,493	4	7,894	23,575	16,307	873
68,636	5.2%	3,714	7	635	26,207	9,805	531
75,525	10.0%	3,839	7	677	38,215	10,789	548
78,874	4.4%	4,669	22	447	10,912	3,585	212
84,586	7.2%	4,173	4	185	51,568	21,147	1,043
95,444	12.8%	3,455	4	13,117	37,319	23,861	864
97,932	2.6%	5,526	8	1,305	35,340	12,242	691
101,622	3.8%	4,286	5	14,618	26,413	20,324	857
115,955	14.1%	6,565	6	5,574	42,182	19,326	1,094
140,438	21.1%	6,386	14	39	39,628	10,031	456
145,454	3.6%	8,447	15	521	37,269	9,697	563
156,775	7.8%	6,935	5	289	62,337	31,355	1,387
161,328	2.9%	9,141	6	8,222	59,362	26,888	1,524
165,179	2.4%	7,807	23	318	27,596	7,182	339
185,654	12.4%	8,685	28	1,732	24,251	6,631	310
203,548	9.6%	11,881	37	23	34,815	5,501	321
228,627	12.3%	10,511	5	37,756	55,140	45,725	2,102
257,539	12.6%	13,994	6	40,268	44,496	42,923	2,332
295,903	14.9%	15,646	14	5,469	49,162	21,136	1,118
346,950	17.3%	19,000	34	1,530	28,053	10,204	559
479,659	38.3%	25,847	18	64	272,901	26,648	1,436
575,567	20.0%	45,316	8	58	108,636	71,946	5,665
601,882	4.6%	36,927	7	2,468	275,385	85,983	5,275

TABLE 2						
Stratum 1 Parcel Counts	Stratum 1 Sale Counts	Estimated Parcels per MA	Change Scenario	Indicated Distribution of MAs	Indicated Sales per MA	Indicated Parcels per MA
1,451	36	1,550		1	36	1,451
1,768	22	1,566	1.0%	1	22	1,768
2,012	35	1,581	1.0%	1	35	2,012
2,963	67	1,597	1.0%	2	34	1,482
3,040	38	1,613	1.0%	2	19	1,520
3,385	78	1,629	1.0%	2	39	1,693
4,088	87	1,645	1.0%	2	44	2,044
4,212	54	1,662	1.0%	3	18	1,404
4,232	108	1,678	1.0%	3	36	1,411
4,376	150	1,695	1.0%	3	50	1,459
4,888	133	1,712	1.0%	3	44	1,629
5,596	169	1,729	1.0%	3	56	1,865
6,026	125	1,747	1.0%	3	42	2,009
6,071	126	1,764	1.0%	3	42	2,024
6,532	199	1,782	1.0%	4	50	1,633
6,915	236	1,800	1.0%	4	59	1,729
6,924	117	1,817	1.0%	4	29	1,731
7,355	177	1,836	1.0%	4	44	1,839
8,299	290	1,854	1.0%	4	73	2,075
8,398	243	1,873	1.0%	4	61	2,100
8,932	260	1,891	1.0%	5	52	1,786
9,561	254	1,910	1.0%	5	51	1,912
11,992	220	1,958	2.50%	6	37	1,999
12,357	260	2,007	2.50%	6	43	2,060
12,703	423	2,057	2.50%	6	71	2,117
14,258	346	2,109	2.50%	7	49	2,037
15,939	534	2,161	2.50%	7	76	2,277
21,919	778	2,215	2.50%	10	78	2,192
21,946	762	2,271	2.50%	10	76	2,195
25,275	1,235	2,327	2.50%	11	112	2,298
26,234	1,214	2,386	2.50%	11	110	2,385
29,945	832	2,445	2.50%	12	69	2,495
34,579	1,848	2,506	2.50%	14	132	2,470
37,723	2,382	2,569	2.50%	15	159	2,515
44,902	1,793	2,633	2.50%	17	105	2,641
48,672	2,606	2,699	2.50%	18	145	2,704
49,117	2,206	2,767	2.50%	18	123	2,729
52,085	2,676	2,836	2.50%	18	149	2,894
56,574	3,006	2,907	2.50%	19	158	2,978
56,606	3,318	2,979	2.50%	19	175	2,979
58,565	3,113	3,054	2.50%	19	164	3,082
58,579	2,455	3,130	2.50%	19	129	3,083
60,765	3,122	3,208	2.50%	19	164	3,198
64,706	3,313	3,289	2.50%	20	166	3,235
65,227	3,493	3,315	0.81%	20	175	3,261
68,636	3,714	3,398	2.50%	20	186	3,432
75,525	3,839	3,483	2.50%	22	175	3,433
78,874	4,669	3,570	2.50%	22	212	3,585
84,586	4,173	3,659	2.50%	23	181	3,678
95,444	3,455	3,751	2.50%	25	138	3,818
97,932	5,526	3,844	2.50%	25	221	3,917
101,622	4,286	4,037	5.00%	25	171	4,065
115,955	6,565	4,238	5.00%	27	243	4,295
140,438	6,386	4,450	5.00%	32	200	4,389
145,454	8,447	4,609	3.57%	32	264	4,545
156,775	6,935	4,840	5.00%	32	217	4,899
161,328	9,141	5,082	5.00%	32	286	5,042
165,179	7,807	5,203	2.39%	32	244	5,162
185,654	8,685	5,463	5.00%	34	255	5,460
203,548	11,881	5,736	5.00%	35	339	5,816
228,627	10,511	6,023	5.00%	38	277	6,017
257,539	13,994	6,324	5.00%	41	341	6,281
295,903	15,646	6,641	5.00%	45	348	6,576
346,950	19,000	6,641	0.00%	52	365	6,672
479,659	25,847	6,641	0.00%	72	359	6,662
575,567	45,316	6,641	0.00%	87	521	6,616
601,882	36,927	6,641	0.00%	91	406	6,614

				TABLE 3		
Stratum 2 Parcel Counts	Stratum 2 Sale Counts	Estimated Parcels per MA	Change Scenario	Indicated Distribution of MAs	Indicated Sales per MA	Indicated Parcels per MA
0	0	1,450		1	0	0
7	0	1,450	0.0%	1	0	7
7	0	1,450	0.0%	1	0	7
8	0	1,450	0.0%	1	0	8
9	0	1,450	0.0%	1	0	9
9	0	1,450	0.0%	1	0	9
12	0	1,450	0.0%	1	0	12
12	0	1,450	0.0%	1	0	12
17	0	1,450	0.0%	1	0	17
18	1	1,450	0.0%	1	1	18
19	0	1,450	0.0%	1	0	19
20	1	1,450	0.0%	1	1	20
26	1	1,450	0.0%	1	1	26
32	1	1,450	0.0%	1	1	32
35	1	1,450	0.0%	1	1	35
39	0	1,450	0.0%	1	0	39
43	1	1,450	0.0%	1	1	43
49	2	1,450	0.0%	1	2	49
59	0	1,450	0.0%	1	0	59
59	1	1,450	0.0%	1	1	59
79	2	1,450	0.0%	1	2	79
82	0	1,450	0.0%	1	0	82
110	2	1,450	0.0%	1	2	110
122	6	1,450	0.0%	1	6	122
127	3	1,450	0.0%	1	3	127
162	3	1,450	0.0%	1	3	162
208	8	1,450	0.0%	1	8	208
233	4	1,450	0.0%	1	4	233
243	4	1,450	0.0%	1	4	243
321	8	1,450	0.0%	1	8	321
354	13	1,450	0.0%	1	13	354
393	25	1,450	0.0%	1	25	393
398	6	1,450	0.0%	1	6	398
434	21	1,450	0.0%	1	21	434
446	12	1,450	0.0%	1	12	446
632	15	1,450	0.0%	1	15	632
779	37	1,450	0.0%	1	37	779
808	33	1,450	0.0%	1	33	808
897	12	1,450	0.0%	1	12	897
904	29	1,450	0.0%	1	29	904
945	25	1,450	0.0%	1	25	945
1,030	38	1,450	0.0%	1	38	1,030
1,056	58	1,450	0.0%	1	58	1,056
1,239	52	1,450	0.0%	1	52	1,239
1,291	53	1,450	0.0%	1	53	1,291
1,373	12	1,450	0.0%	1	12	1,373
1,557	66	1,450	0.0%	1	66	1,557
1,875	44	1,450	0.0%	1	44	1,875
1,992	47	1,450	0.0%	1	47	1,992
2,045	42	1,450	0.0%	1	42	2,045
2,173	28	1,450	0.0%	1	28	2,173
2,359	80	1,450	0.0%	2	40	1,180
2,629	155	1,450	0.0%	2	78	1,315
2,819	129	1,450	0.0%	2	65	1,410
3,224	90	1,450	0.0%	2	45	1,612
3,960	92	1,450	0.0%	3	31	1,320
4,677	224	1,450	0.0%	3	75	1,559
5,050	110	1,450	0.0%	3	37	1,683
5,100	158	1,450	0.0%	4	40	1,275
5,807	296	1,450	0.0%	4	74	1,452
6,092	132	1,450	0.0%	4	33	1,523
9,385	650	1,450	0.0%	6	108	1,564
11,177	443	1,450	0.0%	8	55	1,397
12,165	428	1,450	0.0%	8	54	1,521
14,289	731	1,450	0.0%	10	73	1,429
21,342	1,378	1,450	0.0%	15	92	1,423
36,209	1,617	1,450	0.0%	25	65	1,448

		TABLE 4				
Stratum 4 Parcel Counts	Stratum 4 Sale Counts	Estimated Parcels per MA	Change Scenario	Indicated Distribution of MAs	Indicated Sales per MA	Indicated Parcels per MA
661	21	1,500		1	21	661
780	8	1,500	0.0%	1	8	780
1,029	28	1,500	0.0%	1	28	1,029
1,170	19	1,500	0.0%	1	19	1,170
1,350	65	1,500	0.0%	1	65	1,350
1,409	62	1,500	0.0%	1	62	1,409
1,967	49	1,500	0.0%	1	49	1,967
2,385	77	1,500	0.0%	2	39	1,193
2,846	72	1,500	0.0%	2	36	1,423
2,915	54	1,500	0.0%	2	27	1,458
2,942	19	1,500	0.0%	2	10	1,471
3,525	63	1,500	0.0%	2	32	1,763
4,424	141	1,500	0.0%	3	47	1,475
4,447	197	1,500	0.0%	3	66	1,482
4,457	143	1,500	0.0%	3	48	1,486
4,518	213	1,500	0.0%	3	71	1,506
4,889	110	1,500	0.0%	3	37	1,630
5,072	128	1,560	4.0%	3	43	1,691
5,369	229	1,622	4.0%	3	76	1,790
5,370	191	1,687	4.0%	3	64	1,790
5,688	143	1,755	4.0%	3	48	1,896
7,559	494	1,825	4.0%	4	124	1,890
9,095	316	1,898	4.0%	5	63	1,819
9,198	184	1,974	4.0%	5	37	1,840
9,991	284	2,053	4.0%	5	57	1,998
12,462	396	2,135	4.0%	6	66	2,077
12,484	552	2,220	4.0%	6	92	2,081
12,794	152	2,309	4.0%	6	25	2,132
13,073	562	2,360	2.2%	6	94	2,179
13,357	496	2,411	2.2%	6	83	2,226
13,521	64	2,440	1.2%	6	11	2,254
14,249	407	2,538	4.0%	6	68	2,375
14,349	1,208	2,556	0.7%	6	201	2,392
16,194	594	2,658	4.0%	6	99	2,699
16,284	930	2,764	4.0%	6	155	2,714
17,057	711	2,875	4.0%	6	119	2,843
18,801	927	2,990	4.0%	6	155	3,134
18,918	373	3,110	4.0%	6	62	3,153
19,694	960	3,234	4.0%	6	160	3,282
19,870	82	3,363	4.0%	6	14	3,312
20,295	852	3,498	4.0%	6	142	3,383
20,872	386	3,638	4.0%	6	64	3,479
22,783	775	3,783	4.0%	6	129	3,797
22,788	322	3,935	4.0%	6	54	3,798
24,926	662	4,092	4.0%	6	110	4,154
26,563	64	4,256	4.0%	6	11	4,427
26,571	458	4,426	4.0%	6	76	4,429
26,593	1,166	4,603	4.0%	6	194	4,432
27,524	1,459	4,787	4.0%	6	243	4,587
28,033	503	4,978	4.0%	6	84	4,672
28,546	1,412	5,178	4.0%	6	235	4,758
34,284	3,084	5,385	4.0%	6	514	5,714
34,607	1,538	5,600	4.0%	6	256	5,768
34,869	1,115	5,824	4.0%	6	186	5,812
34,904	971	6,057	4.0%	6	162	5,817
40,580	2,023	6,299	4.0%	6	337	6,763
49,443	467	6,551	4.0%	8	58	6,180
50,526	2,006	6,695	2.2%	8	251	6,316
55,038	1,393	6,963	4.0%	8	174	6,880
59,336	1,295	7,241	4.0%	8	162	7,417
60,664	596	7,531	4.0%	8	75	7,583
70,779	2,097	7,832	4.0%	9	233	7,864
72,686	1,553	8,145	4.0%	9	173	8,076
83,706	2,072	8,471	4.0%	10	207	8,371
109,770	1,464	8,810	4.0%	12	122	9,148
123,673	2,519	9,162	4.0%	13	194	9,513
218,911	6,319	9,529	4.0%	23	275	9,518

				TABLE 5			
Stratum 5 Parcel Counts	Stratum 5 Sale Counts	Estimated Parcels per MA	Change Scenario	Indicated Distribution of MAs	Indicated Sales per MA	Indicated Parcels per MA
31	2	1,400		1	2	31
69	2	1,400	0.0%	1	2	69
109	3	1,400	0.0%	1	3	109
119	2	1,400	0.0%	1	2	119
130	7	1,400	0.0%	1	7	130
171	4	1,400	0.0%	1	4	171
174	6	1,400	0.0%	1	6	174
280	11	1,400	0.0%	1	11	280
354	19	1,400	0.0%	1	19	354
391	8	1,400	0.0%	1	8	391
394	5	1,400	0.0%	1	5	394
404	15	1,400	0.0%	1	15	404
411	9	1,400	0.0%	1	9	411
485	16	1,400	0.0%	1	16	485
498	19	1,400	0.0%	1	19	498
530	1	1,400	0.0%	1	1	530
533	8	1,400	0.0%	1	8	533
535	24	1,400	0.0%	1	24	535
544	15	1,400	0.0%	1	15	544
599	11	1,400	0.0%	1	11	599
632	42	1,400	0.0%	1	42	632
663	44	1,400	0.0%	1	44	663
826	65	1,400	0.0%	1	65	826
835	11	1,400	0.0%	1	11	835
845	35	1,400	0.0%	1	35	845
901	15	1,400	0.0%	1	15	901
1,012	34	1,400	0.0%	1	34	1,012
1,197	37	1,400	0.0%	1	37	1,197
1,217	42	1,400	0.0%	1	42	1,217
1,223	39	1,400	0.0%	1	39	1,223
1,308	41	1,400	0.0%	1	41	1,308
1,312	33	1,400	0.0%	1	33	1,312
1,378	29	1,400	0.0%	1	29	1,378
1,510	55	1,400	0.0%	1	55	1,510
1,605	37	1,400	0.0%	1	37	1,605
1,650	9	1,400	0.0%	1	9	1,650
1,777	50	1,400	0.0%	1	50	1,777
1,790	17	1,400	0.0%	1	17	1,790
1,895	24	1,400	0.0%	1	24	1,895
1,973	50	1,400	0.0%	1	50	1,973
2,188	76	1,400	0.0%	2	38	1,094
2,483	108	1,400	0.0%	2	54	1,242
2,732	45	1,400	0.0%	2	23	1,366
2,841	71	1,400	0.0%	2	36	1,421
3,265	177	1,400	0.0%	2	89	1,633
3,425	104	1,400	0.0%	2	52	1,713
3,571	217	1,470	5.0%	2	109	1,786
3,774	71	1,544	5.0%	2	36	1,887
4,026	91	1,621	5.0%	2	46	2,013
4,282	176	1,702	5.0%	3	59	1,427
4,617	91	1,787	5.0%	3	30	1,539
4,772	87	1,876	5.0%	3	29	1,591
5,271	206	1,970	5.0%	3	69	1,757
5,900	191	2,068	5.0%	3	64	1,967
5,943	114	2,172	5.0%	3	38	1,981
6,044	85	2,280	5.0%	3	28	2,015
6,158	135	2,394	5.0%	3	45	2,053
6,568	143	2,514	5.0%	3	48	2,189
6,995	144	2,640	5.0%	3	48	2,332
7,048	152	2,772	5.0%	3	51	2,349
8,168	222	2,910	5.0%	3	74	2,723
8,176	345	3,056	5.0%	3	115	2,725
8,264	180	3,209	5.0%	3	60	2,755
11,197	113	3,369	5.0%	3	38	3,732
12,089	102	3,538	5.0%	3	34	4,030
19,980	417	3,538	0.0%	6	70	3,330
53,199	342	6,368	80.0%	8	43	6,650

TABLE 6						
Stratum 6 Parcel Counts	Stratum 6 Sale Counts	Estimated Parcels per MA	Change Scenario	Indicated Distribution of MAs	Indicated Sales per MA	Indicated Parcels per MA
92	0	2,400		1	0	92
103	5	2,400	0.0%	1	5	103
120	0	2,400	0.0%	1	0	120
157	3	2,400	0.0%	1	3	157
162	0	2,400	0.0%	1	0	162
237	7	2,400	0.0%	1	7	237
269	9	2,400	0.0%	1	9	269
278	2	2,400	0.0%	1	2	278
288	2	2,400	0.0%	1	2	288
291	14	2,400	0.0%	1	14	291
313	8	2,400	0.0%	1	8	313
332	6	2,400	0.0%	1	6	332
342	6	2,400	0.0%	1	6	342
355	4	2,400	0.0%	1	4	355
362	7	2,400	0.0%	1	7	362
433	10	2,400	0.0%	1	10	433
437	2	2,400	0.0%	1	2	437
444	4	2,400	0.0%	1	4	444
460	0	2,400	0.0%	1	0	460
516	8	2,400	0.0%	1	8	516
530	11	2,400	0.0%	1	11	530
623	14	2,400	0.0%	1	14	623
634	7	2,400	0.0%	1	7	634
662	8	2,400	0.0%	1	8	662
709	9	2,400	0.0%	1	9	709
761	5	2,400	0.0%	1	5	761
797	7	2,400	0.0%	1	7	797
929	16	2,400	0.0%	1	16	929
986	21	2,400	0.0%	1	21	986
1,015	14	2,400	0.0%	1	14	1,015
1,128	28	2,400	0.0%	1	28	1,128
1,309	19	2,400	0.0%	1	19	1,309
1,415	32	2,400	0.0%	1	32	1,415
1,484	17	2,400	0.0%	1	17	1,484
1,709	37	2,400	0.0%	1	37	1,709
1,746	31	2,400	0.0%	1	31	1,746
1,769	14	2,400	0.0%	1	14	1,769
1,924	37	2,400	0.0%	1	37	1,924
2,014	38	2,400	0.0%	1	38	2,014
2,098	42	2,400	0.0%	1	42	2,098
2,174	24	2,400	0.0%	1	24	2,174
2,264	43	2,400	0.0%	1	43	2,264
2,349	32	2,400	0.0%	1	32	2,349
2,531	75	2,400	0.0%	1	75	2,531
3,325	44	2,400	0.0%	1	44	3,325
3,376	54	2,400	0.0%	1	54	3,376
3,509	38	2,400	0.0%	1	38	3,509
3,553	60	2,400	0.0%	1	60	3,553
3,693	89	2,400	0.0%	2	45	1,847
3,780	64	2,400	0.0%	2	32	1,890
4,149	92	2,400	0.0%	2	46	2,075
4,298	75	2,400	0.0%	2	38	2,149
4,921	41	2,400	0.0%	2	21	2,461
5,062	111	2,400	0.0%	2	56	2,531
5,425	90	2,400	0.0%	2	45	2,713
5,947	152	2,400	0.0%	2	76	2,974
5,993	44	2,400	0.0%	2	22	2,997
6,808	100	3,120	30.0%	2	50	3,404
8,203	121	3,120	0.0%	3	40	2,734
8,869	125	3,120	0.0%	3	42	2,956
11,166	164	3,120	0.0%	4	41	2,792
11,815	158	3,120	0.0%	4	40	2,954
12,888	285	3,120	0.0%	4	71	3,222
14,631	183	3,120	0.0%	5	37	2,926
17,133	220	3,120	0.0%	5	44	3,427
17,343	402	3,120	0.0%	6	67	2,891
31,227	471	3,120	0.0%	10	47	3,123